

REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-14 are currently pending, Claim 1 having been amended, and Claims 11-14 having been added. The changes and additions to the claims do not add new matter and are supported by the originally filed specification, for example, on page 13, lines 19-21; page 14, lines 3-10; page 15, lines 16-24; page 16, lines 1-4; page 17, lines 8-17; and Figs. 5, 6A, and 6B.

In the outstanding Office Action, Claims 1 and 6 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ejima (U.S. Patent No. 7,176,962) in view of Levien (U.S. Patent No. 5,524,162); Claims 2 and 7 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ejima in view of Levien and Satoh et al. (U.S. Patent No. 5,708,863, hereafter “Satoh”); Claims 3 and 8 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ejima in view of Levien, Satoh and Ohishi et al. (U.S. Patent No. 5,713,049, hereafter “Ohishi”); Claims 4 and 9 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ejima in view of Levien, Satoh and Yoshihara et al. (U.S. Patent No. 5,172,233, hereafter “Yoshihara”); and Claims 5 and 10 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ejima in view of Levien, Satoh and Imada (U.S. Pub. No. 2004/0090532).

With respect to the rejection of Claim 1 under 35 U.S.C. §103(a), Applicant respectfully submits that the amendment to Claim 1 overcomes this ground of rejection.

Amended Claim 1 recites, *inter alia*,

a sharpness comparison device configured to compare sharpness based on the plurality of imaging data obtained by the imaging data obtaining device, and to determine whether a difference in sharpness corresponding to different exposure times of the plurality of imaging data indicates one of a shake of the digital camera, a movement

of the subject, and absence of a blur based on the compared sharpness.

Applicant respectfully submits that Ejima and Levien fail to disclose or suggest at least these features of amended Claim 1.

Ejima describes a digital camera and digital processing system for correcting motion blur using spatial frequency. Ejima shows in Figure 4 that an image 1 can be captured at a shutter speed of  $T/2$  seconds (step 104) and that an image 2 can be captured at a shutter speed of  $T$  seconds (step 109). The Office Action takes the position that Ejima describes comparing a sharpness based on a plurality of imaging data where it describes comparing spatial frequency components of image 1 and image 2 (see Office Action, at page 3, citing col. 16, lines 20-33 and col. 22, lines 17-20 of Ejima).

The Office Action acknowledges that Ejima fails to disclose or suggest a sharpness comparison device configured to determine whether a difference in sharpness of the plurality of imaging data indicates a shake of a digital camera or a movement of a subject based on the compared sharpness. The Office Action relies on Levien to remedy the deficiencies of Ejima with regard to Claim 1.

Levien is directed to a method of adaptive sharpening images in which an image is divided into smaller sub-areas, and each sub-area image is adaptively sharpened individually (see col. 1, lines 54-59). Levien describes a problem where the sharpness of an image varies within the same photograph. Levien describes that uneven sharpness can result from motion blur where a moving object or a moving background has a difference in sharpness (see col. 1, lines 40-45).

The Office Action takes the position that Levien's description of uneven sharpness resulting from motion blur where a moving object or a moving background has a difference in sharpness corresponds to "a movement of the subject based on the compared sharpness," as recited in previous Claim 1. The Office Action takes the position that previous Claim 1

uses the alternative limitation “or” in “to determine whether a difference in sharpness of the plurality of imaging data indicates a shake of the digital camera or a movement of the subject based on the compared sharpness.” Therefore, the Office Action takes the position that the prior art can read on the limitation “a movement of a subject based on the compared sharpness,” or the limitation “a difference in sharpness of the plurality of imaging data indicates a shake of the digital camera.”

However, amended Claim 1 recites “to determine whether a difference in sharpness corresponding to different exposure times of the plurality of imaging data indicates *one of a shake of the digital camera, a movement of the subject, and absence of a blur based on the compared sharpness.*” Therefore, Applicant submits that Claim 1 removes the alternative limitation “or” and that the features “shake of the digital camera,” “movement of the subject,” and “absence of a blur” must all be considered in applying the prior art.

Furthermore, Levien only describes a problem where uneven sharpness can result from motion blur where a moving object or a moving background has a difference in sharpness. However, Levien never describes actually analyzing the uneven sharpness, and determining whether it indicates one of three possible outcomes, which include a shake of the digital camera, a movement of the subject, or an absence of a blur. Furthermore, Levien never describes comparing sharpness *corresponding to different exposure times.*

Therefore, Applicant submits that Levien fails to disclose or suggest “to determine whether a difference in sharpness corresponding to different exposure times of the plurality of imaging data indicates one of a shake of the digital camera, a movement of the subject, and absence of a blur based on the compared sharpness,” as defined by amended Claim 1.

Therefore, Applicant submits that Levien fails to remedy the deficiencies of Ejima with regard to amended Claim 1.

Satoh, Ohishi, Yoshihara, and Imada have been considered but fail to remedy the deficiencies of Ejima and Levien with regard to Claim 1.

Therefore, Applicant respectfully submits that amended Claim 1 (and all associated dependent claims) patentably distinguishes over Ejima, Levien, Satoh, Ohishi, Yoshihara, and Imada, either alone or in proper combination.

With regard to new dependent Claims 11-14,

Claim 11 recites, *inter alia*,

wherein the sharpness comparison device compares a sharpness value corresponding to a time period having a first exposure time with a sharpness value corresponding to time period having a second exposure time, and if the sharpness value for the first exposure time is greater than or equal to the sharpness value for the second exposure time, then it is determined that a blur has not occurred, and if the sharpness value for the first exposure time is less than the sharpness value for the second exposure time, then it is determined that a blur has occurred.

Claim 12 recites, *inter alia*,

wherein when the sharpness comparison device determines that a blur has occurred, a second comparison is made between the sharpness value corresponding to the time period having the second exposure time and a sharpness value corresponding to a second time period having the second exposure time, and if the result of the second comparison is that the sharpness values are equal then it is determined that a shake of the digital camera has occurred, and if the result of the second comparison is that the sharpness values are not equal then it is determined that a movement of the subject has occurred.

Claim 13 recites, *inter alia*,

wherein the sharpness comparison device compares a sharpness value corresponding to a first time period having a first exposure time with a second time period having the first exposure time, and if the sharpness value for the first time period having the first exposure time and the sharpness value for the second time period having the first exposure time is the same then it is determined that a blur has not occurred.

Claim 14 recites, *inter alia*,

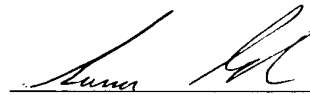
wherein when the sharpness comparison device determines that there is a difference between the sharpness value for the first time period having the first exposure time and the sharpness value for the second time period having the first exposure time, then a second comparison is made between a sharpness value corresponding to a first time period having a second exposure time and a sharpness value corresponding to a second time period having the second exposure time, and based on the result of the second comparison it is determined whether a difference in the sharpness values indicates one of a shake of the digital camera and a movement of the subject.

Applicants respectfully submit that new dependent Claims 11-14 patentably distinguish over Ejima, Levien, Satoh, Ohishi, Yoshihara, and Imada, either alone or in proper combination, for at least the reasons discussed above regarding amended independent Claim 1.

Consequently, in light of the above discussion and in view of the present amendment, the outstanding grounds for rejection are believed to have been overcome. The present application is believed to be in condition for formal allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.



---

James J. Kulbaski  
Attorney of Record  
Registration No. 34,648

Customer Number  
**22850**

Tel: (703) 413-3000  
Fax: (703) 413 -2220  
(OSMMN 08/07)

Sameer Gokhale  
Registration No. 62,618